Diabetes Initiative of South Carolina

2000 Annual Report

John A. Colwell, MD, PhD
Chairman, Board of Directors
Diabetes Initiative of South Carolina
January, 2001

To Governor Hodges and the General Assembly:

On behalf of the Board of Directors of the Diabetes Initiative of South Carolina, I am pleased to present our sixth annual report. This report was requested in Chapter 39, Section 44-39 of the Diabetes Initiative of South Carolina Act.

In accordance with the provisions of the act, we have established the Diabetes Initiative of South Carolina Board and the Diabetes Center, Outreach and Surveillance Councils. Administrative offices and a Diabetes Center of Excellence are operative at The Medical University of S.C., and a second site is established at The University of S.C. School of Medicine in The Department of Family Medicine. Close liaisons have been developed between our Initiative and The S.C. Diabetes Control Program of the Department of Health and Environmental Control, the American Diabetes Association, Carolina Medical Review, and The Area Health Education Consortium (AHEC).

In 1999, in collaboration with the S.C. DCP, DHEC, we issued our second report “The Burden of Diabetes in South Carolina”. This report established that South Carolina ranks among the top 5 states in the U.S. in the prevalence of diabetes. More than 300,000 of our citizens have diabetes. The rates of major complications of diabetes (heart attacks, amputations, end stage renal disease) are increasing at rates of 20 - 27% since 1994. Total yearly cost of diabetes is in excess of $850 million in South Carolina.

In recognition of this major health problem, the DSC Board has developed a long range Strategic Plan, which defines 9 major goals and specific steps to be taken to combat this devastating disease. Ongoing surveillance is documenting the impact of the many programs we have developed. We are seeing encouraging trends in certain areas since The Diabetes Initiative was started. Specific risk markers and guidelines for care are receiving new attention, and we are implementing a statewide program that has attracted the attention of health care providers and people with diabetes. We are confident that this Initiative will eventually reduce costs of care, result in fewer complications and establish an improved quality of life for people with diabetes in our state. These changes will occur gradually in this chronic disease, predictably over the next 2-3 decades.

We are pleased to report that this Initiative has had extraordinary success in helping to develop proposals which have generated substantial extramural support directed at problems associated with diabetes. For 2001, this outside support is more than 11 times the yearly allocation by the state for The Diabetes Initiative of South Carolina.

We are enthusiastic that the Diabetes Initiative of South Carolina will be successful in combating this serious disease by its innovative programs of community outreach, education, and surveillance. We are grateful to the General Assembly for establishing this Initiative and sincerely hope that you will find that this report is responding to the needs of the people in South Carolina.

John A. Colwell, MD, PhD
Chair, Diabetes Initiative of South Carolina Board
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EXECUTIVE SUMMARY
Executive Summary

In calendar year 2000, The Diabetes Initiative of South Carolina had major accomplishments in two broad areas:

1. **Further development and maturation of ongoing programs of professional education, surveillance, and community outreach.**

   A major goal of The Diabetes Initiative of S.C. (DSC) has been to develop a statewide infrastructure of trained individuals who can improve the health outcomes of people with diabetes. To this end, we have collaborated with the Deans of MUSC and USC in an innovative program that rotates every third year medical student into a community practice experience, with diabetes as the prototype disease. Students examine care for diabetes and develop community projects to increase awareness of the disorder. Another DSC program is to train nurses, dieticians, and other health professionals to become Certified Diabetes Educators (CDE). With this certification, they can counsel and educate diabetic patients with great skill, to supplement the physician’s care. Over the past 5 years, we have seen the number of CDE’s grow from 25 to over 200 in South Carolina. The Colleges of Pharmacy at MUSC and USC have successfully implemented a program to train 100 practicing pharmacists about diabetes and its complications. Finally, our professional education efforts include our Annual Symposium, over 50 yearly talks by DSC physicians and nurses to practicing health professionals in diabetes, and the distribution of a Primary Care Manual to all primary care physicians in South Carolina.

   Surveillance efforts are ongoing, with the collaboration of the S.C. Diabetes Control Program, DHEC, Carolina Medical Review, Bureau of Health Statistics, and other accurate data sources. The Surveillance Council takes the lead role in defining priorities. Comprehensive reports entitled “The Burden of Diabetes in South Carolina”, have been issued in 1996 and 1999. These reports carefully define trends, and will be repeated every 3-5 years to determine the long term outcomes from our many initiatives.

   Community outreach and patient education programs are growing at rapid rates. Major new extramural grant support is described below. We have developed a Model Diabetes Education Program which aids clinics, hospitals, and centers to organize these efforts and ultimately to achieve recognition by The American Diabetes Association. We are developing 4 coalitions, in collaboration with S.C. DCP-DHEC, to expand community input from all geographic areas in the state.

   These programs are defined in more detail in the report.

2. **Major expansion of supplemental support for new programs which are closely affiliated with the goals and objectives of The Diabetes Initiative of South Carolina.**

   In the past year, faculty members from USC and MUSC have been successful in obtaining major support from The Centers for Disease Control & Prevention, from The Agency for Healthcare Research and Quality, and from The U.S. Department of Health and Human Services for proposals which will impact directly upon access to care, health outcomes, and for people with diabetes in South Carolina.

   (1.) Charleston/Georgetown REACH 2010 Diabetes Coalition: Carolyn Jenkins, RD, RN, CDE, Dr.PH. (MUSC) is the Principal Investigator of this 5 year grant which is funded at $982,000 yearly. This is an urban coalition which is working together to develop a plan to improve diabetes outcomes for over 11,012 African Americans in Charleston and Georgetown.
counties with diagnosed diabetes. Multiple partners include all of the key organizations in the area who deal with people with diabetes. This area has an extremely high prevalence of diabetes and its complications, especially among African Americans. The proposal was developed to closely follow the goals and objectives of The DSC 10 Year Strategic Plan.

(2.) **Understanding and Limiting Health Disparities in Blacks.** Principal Investigator: Dr. Barbara Tilley (MUSC). This five year project is funded at 1.6 million yearly for year 1. Total: $10.1 million. A multi-disciplinary team will analyze causes and contributing factors for inequalities related to the delivery and practice of health care. They will identify and implement strategies to improve the process. People with diabetes, hypertension (often coexistent) or AIDS are targeted in the proposal.

(3.) **S.C. Diabetes Child and Adolescent Registry.** Elizabeth Mayer-Davis, PhD (USC) is Principal Investigator. This 5 year grant is funded at $2.3 million (total). It is part of a multi-center study. It will determine the prevalence of type 2 diabetes in children and adolescents in South Carolina. Results will be compared to other regions and to national figures obtained in the study.

These three studies clearly provide major outside support to explore critical issues concerning diabetes and its complications in South Carolina. They supplement 9 other programs of education, care, and clinical research. In all, our supplemental funding is $5,412,170/year, which is 11 times our request for state funding for fiscal year 2001-2002. The total outside grant funding is $27,061,013 for five years. The Diabetes Initiative is honored to be associated with these exciting proposals, and it is clear the infrastructure and administrative support that we have established has contributed significantly to this success. Thus, modest state support has been leveraging to provide progress which will materially improve education and care for people with diabetes in South Carolina.
BOARD OF DIRECTORS

In 1999, The Diabetes Initiative of South Carolina (DSC) and its Surveillance Council have collaborated with the S.C. Diabetes Control Program, Department of Health and Environmental Control (S.C. DCP-DHEC) in its second report “The Burden of Diabetes in South Carolina”. The report documents that diabetes continues to be a serious public health problem in South Carolina. At least 160,000 people in our state are aware that they have diabetes, and it is estimated that an equal number may have the disease, but do not know it. Total yearly hospital and emergency room costs from diabetes and its complications are approximately $850 million, and the average yearly cost of hospitalization in 1997 was $12,664. The disease is a chronic one, and is often accompanied by complications, including loss or decrease in vision, kidney failure, amputations, heart attacks, and strokes. Hospitalization rates for these complications are increasing. Hypertension and increase in blood cholesterol are frequent. African Americans have twice the prevalence of diabetes, and are doubly affected by major vascular complications.

The DSC Board has recognized these issues and has developed a Long Range Strategic Plan to address them. The Plan has nine major goals.

Goal I: To improve knowledge of diabetes, quality of life, and access to prevention and intervention services for people at risk and those affected by diabetes.

Goal II: To increase the utilization of short-term (surrogate) measures which lead to actions that will delay progression of complications of diabetes.

Goal III: To address the needs of persons at risk and with diabetes by increasing services and education in health professional shortage areas in South Carolina.

Goal IV: To reduce the morbidity rates from diabetes-related complications.

Goal V: To reduce the age-adjusted mortality rates from diabetes and its complications.

Goal VI: To decrease risks for select groups of people with diabetes where the prevalence and complication rates exceed those of others.

Goal VII: To reduce preventable hospital admissions and charges for diabetes.

Goal VIII: To reduce preventable visits to the emergency room by people with diabetes.

Goal IX: To improve the statistical basis for estimating the prevalence of diabetes in South Carolina.

For each goal, we have defined the major issues that are presently recognized, and have indicated major quantifiable objectives. Specific tasks and programs of the DSC Outreach, Diabetes Center of Excellence, and Surveillance Councils are defined, and integration of the programs with the S.C. DCP-DHEC, and with the activities of the American Diabetes Association, South Carolina office is described. Oversight is provided by the Diabetes Initiative of South Carolina Board.
The Strategic Plan recognizes that all of the late stage complications of diabetes mellitus can be prevented or their progression slowed down by early recognition and institution of intensive, well defined, preventative strategies. The Burden Report shows progress in many areas, since the inception of our programs. Over 2/3 of people with diabetes have had their eyes and feet examined in the last year. These two simple procedures will slow down the rate of visual loss or lower extremity amputation, respectively. Recent data from Carolina Medical Review shows that our Medicare supported diabetic patients have good rates for determination of HbA1c, lipids, and for eye examinations. Encouraging trends are occurring with pregnancy and diabetes, presumably reflecting improved blood glucose control. Rates of congenital malformations have fallen 25% in the past 6 years, and infant mortality has declined from 12.8 to 9.8/1000 births between 1991 and 1997. Finally, after a steady rise in mortality from diabetes and its complications form 1980 - 1995, mortality rates have started to decline in the past 2 years, and are projected to continue to fall in future years.

Although health professional shortages are still recognized in many South Carolina counties, DSC is the prime mover in creating a rapid growth in the number of certified diabetes educators, pharmacists specially trained in diabetes education, preclinical students who are learning about diabetes, and medical students who are rotating in rural communities and are using diabetes as the prototype disease to study, understand, and to develop community programs. DSC has created an unprecedented professional education program for practicing physicians and for those in training. This includes multiple seminars and educational material, including a manual for the management of diabetes, which has been distributed to every primary care physician in South Carolina.

The specific details of many of these programs are given in this yearly report. Although the Board recognizes that we have a long term task ahead of us, we are encouraged that The Diabetes Initiative is making a real impact in diabetes and its complications in South Carolina.
Major Goals of Strategic Plan

Diabetes Initiative of South Carolina

People at Risk or with Diabetes

Expand HMO/Insurance Coverage for Diabetes Care, Supplies and Education

Improve Public Awareness through Media Channels

Improve Knowledge and Access to Prevention, and Intervention Services for Diabetes

Health Professional

Community-Based and Patient Education

Utilization of Measures and Actions that Decrease Risks and Complications

Unnecessary Hospital Admissions

ER Visits for Preventable Complications

Costs for Complications

Premature Deaths

Morbidities & Disabilities

Improve Quality of Life
Diabetes Initiative of South Carolina

Organizational Chart

DSC Board

Center of Excellence Council
  MUSC Diabetes Center of Excellence

Outreach Council
  ADA-SC Outreach Program

Surveillance Council
  S.C. Diabetes Control Project DHEC

USC Site
School of Medicine
Department of Family/Preventive Medicine
BUDGET AND SUPPLEMENTAL SUPPORT
Budget and Supplemental Support

BUDGET

<table>
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<tr>
<td>2001-2002 (Requested)</td>
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An increase in support for 2001-2002 is requested to develop a new site in the upstate region. This would supplement the main office at The Diabetes Center of Excellence, MUSC, and the active U.S.C. site, housed in the Department of Family Medicine. A modest increase in support would provide critical staff to further develop Diabetes Initiative programs in the rapidly growing upstate counties.

SUPPLEMENTAL SUPPORT

The establishment of the Diabetes Initiative of South Carolina has had a major objective to at least match state funding with outside grant support. We have each year consistently exceeded state support, each year since The Diabetes Initiative was created in 1994. We are pleased to report major success in this area in 2000-2001.

Education and Care

1. S.C. Diabetes Control Program-DHEC (SCDCP-DHEC): This is a 5-year grant continuation from the Centers for Disease Control and Prevention (CDC) to S.C. DCP-DHEC for a statewide diabetes control program. Its goal and objectives are developed so as to integrate and complement the Strategic Plan of the Diabetes Initiative of South Carolina. Oversight is provided by the DSC Board of Directors. This continuation grant’s first year was funded for $359,700, from 07/01/1999 - 06/30/2000 and second year for $366,842.00, from 07/01/2000 – 06/30/2001. Total = $1,798,500 (7/01/99 - 6/30/2004). P.I. is Lisa Waddell, MD.

2. Hypertension and Diabetes Management and Education Program (HAD-ME): Charleston’s Enterprise Community. In July 1997, we were informed that DSC had received funding of $652,727 from the SC Health and Human Services to support the MUSC Healthy South Carolina Initiative. Funding for Year 1 $229,270, Year 2: $209,996, and Year 3: $213,461. Total funding for 3 (5/15/97 - 6/30/01) years is $652,727. The program offers community-based education and linkages with ongoing care, medication management, foot care, eye screening, and case management for those with high resource utilization. Successful components will be replicated in other communities. P.I. is Carolyn Jenkins, RD, RN, CDE, Dr.PH.

3. Enterprise/MUSC Neighborhood Health Program: The program is funded by the City of Charleston for a total of $280,272 from 01/01/1995 to 01/01/2000. Year 01/01/1999 – 01/01/2000 is $28,272. P.I. is Carolyn Jenkins, RD, RN, CDE, Dr.PH.

4. Partners in Wellness (HBCU): A collaborative program of SC’s Historically Black Colleges and Universities (HBCU), AHEC, and MUSC to document and reduce risks for hypertension and diabetes through student research, teaching, and service to communities was funded (1/1/98 -
12/31/2000) by MUSC’s Healthy South Carolina Initiative for $178,500 for Year 1, $144,000 for Year 2, $144,000 for Year 3. Partners in Wellness is funded by the Duke Endowment with an approved $112,000 grant for year 2001 and anticipates an additional $149,000 in 2002. Total funding for 5 years is $727,500. The program goals are to reduce risks and recruit African Americans into careers in health by engaging undergraduate students in a course that involves research, teaching, and service for students enrolled at SC State University, Claflin College, Voorhees College, Morris College, Allen University, and Benedict College. P.I. is W. Timothy Garvey, MD. William Robinson, MA is program manager.

5. The Deans Rural Primary Care Medical Clerkship (DRPCMC): This program is for third year medical students at MUSC and USC to develop a community-based training program of diabetes education and care under faculty supervision. The Diabetes Initiative prepares curricular material and interacts with faculty and students in this innovative program. Initial 3-year award of $643,532 from the NIH to Alec Chessman, MD, and David Garr, MD, Department of Family Medicine, MUSC. Currently, $50,000 (07/01/1999-06/30/2000) was funded by Fullerton Foundation, Inc. and $51,5000 (07/01/1999 - 01/01/2001) is from Duke Endowment and USC. Total funding is $845,032. Dr. Layton McCurdy is P.I. and Dr. David Ross Garr is Co-P.I.

6. Reducing The Impact of Diabetes in Northeastern South Carolina (PCHN): This is a 3 year award, by the Duke Endowment to The Palmetto Community Health Network, PCHN (President: Ned Schlafen) to develop a program about diabetes and its complications for health professionals and people with diabetes in the 7 county, 10 hospital Pee Dee area of South Carolina (7/1/99-6/30/2002). Professional education programs are delivered by The Diabetes Initiative to over 200 physicians and other health professionals. Year 1/funding: $147,820, Year 2/$ 168,570, Year 3/$151,570, total: $467,960 (Duke Endowment: primary support).

7. Charleston/Georgetown REACH 2010 Diabetes Coalition (Phase I): P.I. Carolyn Jenkins, RD, RN, CDE, Dr.PH. Total $305,311 funded by the Centers for Disease Control and Prevention (CDC) from 9/30/1999 - 9/29/2000. This is an urban-rural coalition working together to develop a plan to improve diabetes outcomes for more that 11,012 African Americans in Charleston and Georgetown Counties with diagnosed diabetes. Partners include the Trident Black Nurses Association, the County Library, DHEC County Health Department, Charleston’s Enterprise Community, Georgetown’s CORE Diabetes, Alpha Kappa Alpha Sorority (AKAS), Project SUGAR, Communi-I-Care, Carolina Medical Review, and the Medical University of South Carolina community-based diabetes programs of the Diabetes Initiative of South Carolina. The Charleston/Georgetown Diabetes Coalition (REACH 2010, Phase II) demonstration project is currently funded for a 4-year grant (09/30/2000-09/29/2004), with $982,001 in fiscal year 09/30/2000-09/29/2001. Total funding is $3,928,000 for these 4 years + $305,311 = $4,233,311.

8. REACH 2010: “Diabetes Risk Reduction for Residents of Low Country in SC (Allendale-Beaufort-Hampton-Jasper Diabetes Initiative of South Carolina)” is funded by the Centers for Disease Control and Prevention (CDC). The program will have multiple approaches through awareness of diabetes, access of diabetes care, and improvement of diabetes care. The budget is $153,000 for the period of 9/30/2000-9/29/2001. PI: Valerie Muehleman, RD
Clinical Research

MUSC and USC have nationally recognized basic and clinical research programs, which address diabetes mellitus from a variety of perspectives. Clinical research is most likely to lead to early translation into efforts by the Diabetes Initiative. Only the major programs are reported:

1. S.C. Diabetes Child & Adolescent Registry: P.I. Elizabeth Mayer-Davis, PhD (USC). A five-year (2000-2005) grant of $2.3 million was awarded by the Centers for Disease Control and Prevention to Elizabeth Mayer-Davis, PhD for research on the prevalence of type 2 diabetes in youth in South Carolina. The grant supports one of several national sites. Studies are done in collaboration with researchers at some of the nation's most prestigious institutions. Daniel T. Lackland, Dr.PH and Steve Willi, MD at MUSC will work with Elizabeth Mayer-Davis. PhD on this project.

2. Understanding and Limiting Health Disparities in Blacks: P.I. Dr. Barbara Tilley (MUSC). A five-year project aiming to improve health outcomes of people with hypertension, diabetes and AIDS in South Carolina was funded by the Agency for Healthcare Research and Quality (AHRQ), the U.S. Department of Health and Human Services. The project is designed to improve the quality of health care, reduce its cost, improve patient safety, decrease medical errors, and broaden access to essential services. Under the grant, a multi-disciplinary team will analyze causes and contributing factors for inequalities related to the delivery and practice of health care, and will identify and implement strategies to improve the process. Total funding (10/01/2000-08/31/2005) is $10.1 million, with $ 1.6 million for fiscal year 10/01/2000-08/31/2001.

3. Markers and Mechanisms of Macrovascular Disease in IDDM: P.I. - W.T. Garvey, MD (MUSC). $906,874 for year 4 (9/1/99-8/31/00). From 9/1/96 - 8/31/01, total award will be $3,967,211. This major award combines the research expertise of 20 members of the MUSC and USC faculty under one program. These investigators study mechanisms which may cause accelerated vascular disease in patients with type I diabetes. The patients are long term participants in the Diabetes Control and Complications Trials (DCCT). Additional supplemental funding of $277,114 for Year 1 (7/1/98 - 6/30/99) and $168,224 for Year 2 (6/30/99 - 6/29/2000) has been awarded.

4. GENNID: P.I. W.T. Garvey, MD (MUSC). A genetic study of diabetes in family traits. $ 147,600 funded by the American Diabetes Association from 10/01/1999 - 03/31/2001. This is a continued study and education on the Gullah population of the South Carolina Sea Islands’ “Genetic Markers for Type 2 Diabetes and Pathogenic Metabolic Traits” from 1993 to 1998 with a total funding of $800,000.

5. Epidemiology of Diabetes Intervention and Complications (EDIC): P.I.s - J. Colwell, MD, PhD and R. Mayfield, MD $ 89,955 year 5, 3/1/00-2/28/01. Total award $735,000. This study is a follow-up study of the course of patients enrolled in the DCCT in Charleston. Along with patients from 27 other centers, this group of type 1 diabetic patients provide a patient group for study in program no.3, above.
Total Education & Care Supplemental Support

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Total Clinical Research Supplemental Support

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Professional Education Programs

These programs are supported by minimal registration fees and by generous corporate donations. Our balance for Year 06 in this account is $57,845.00.

Summary:

Supplemental Funding

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Comment:

Outside yearly funding is now over 11 times our current request for FY2001-2002 support for the Diabetes Initiative of South Carolina. We have created the infrastructure, epidemiologic data, and administrative support to materially aid in this success. We are proud to have contributed to this outstanding and impressive growth of programs in education, care, and clinical research in diabetes in South Carolina.
Diabetes Initiative of South Carolina
Outreach Council Annual Report
January 1, 2000 – December 31, 2000

Functions

As defined by Section 44-39-50 amendment to 1976 Code of Laws for South Carolina, the Diabetes Initiative Outreach Council shall oversee and direct efforts in patient education and primary care including:

- Promoting adherence to national standards of education and care.
- Ongoing assessment of patient care, costs, and reimbursement issues for persons with diabetes in South Carolina.
- Preparing an annual report and budget proposal for submission to the Diabetes Initiative of South Carolina Board.

Major Accomplishments (related to promoting adherence to national standards of education and care):

- The DSC Internet Home Page is updated routinely to include the latest recommendations for diabetes care and education. Statistics related to diabetes in South Carolina, current educational programs, resources for diabetes care and education, all publications, and information on improving diabetes care and education can be obtained from the DSC Home Page. There have been 4159 “hits” or persons accessing information from this site.

- Patient Report Card for tracking diabetes care has been revised and expanded. Currently, the expanded Report Card is being tested in several sites in the state and will be available for all in the early spring.

- The DSC/DCP Model Diabetes Education Program has been revised based on newly issued American Diabetes Association guidelines. Currently there are 16 ADA recognized programs with 27 sites and 18 sites recognized by the DSC/DCP Recognition Program. More than 52 sites throughout the state are working toward official recognition.

- DSC Community Outreach Programs have provided educational activities related to diabetes to approximately 3,000 persons during the past year. These activities have included health fairs, risk factor screening, coalition meetings, and public awareness related to diabetes care.

Major Accomplishments (for ongoing assessment and interventions related to patient care costs/reimbursement/education issues for persons with diabetes):

- SC/DCP Coalition Development: Coalition efforts are being led by South Carolina’s Diabetes Control Program. Currently 3 of the state’s 4 regional coalitions are active. Each regional coalition was/will be asked to select at least one priority action to improve diabetes outcomes in South Carolina and will meet quarterly as a group. The regional coalitions will form the Statewide Coalition which will meet at least once each year. The Statewide Coalition will meet in collaboration with the DSC Annual Primary Care Symposium. In
2000, community groups with active outreach programs shared their successes with others in one of the DSC workshops.

- **DSC/DCP Diabetes Resources in South Carolina** has been added to our DSC Web site. Currently, the USC DSC Site is updating and expanding the Resource Listing. Each county will have health care resource listings including certified diabetes educators, pharmacists with Academic Accredited diabetes disease state management training, primary care providers and clinics.

- **Community Screening for Diabetes Complications** are offered through **PRO Hampton County** and through **Charleston’s HAD-ME activities**. At the annual screening day in the spring, **PRO Hampton County Diabetes Connection** offered HbA1c, urine microalbumin, cholesterol and lipid profile, eye screening, feet screening while HAD-ME offers these activities at least once each quarter. All patients receive education and training related to diabetes management. Additionally, Medical Students assigned to the **Dean’s Rural Clerkship** rotation at MUSC and USC provide community education and home visits to assist persons with diabetes to reduce risks for complications.

- **HAD-ME and Charleston’s Enterprise/MUSC Neighborhood Health Program** continue to conduct weekly education and care activities in 6 Neighborhood Community Centers. More than 600 patients are enrolled in the program. Community priorities continue to be related to diabetes and hypertension. The interdisciplinary team has participated in more than 60 community events during the year including health fairs, community forums, health education in clubs, churches, and community centers. Nursing, dental, health, administration, and medical students are working together to assist the community in addressing health issues. The Enterprise/MUSC Community Clinic received a special recognition from US HUD efforts to improve the health of community residents.

- **HBCU Partners in Wellness** At the end of the current semester, The “Partners in Wellness” course will have been taught to students at 5 of the 6 Historically Black Colleges and University campuses (Allen, Benedict, Claflin, SC State, and Voorhees). The course will be taught at Morris College next semester. To date, 215 students have successfully completes the 15 week course, which focuses on diabetes and hypertension for college students interested in careers in the health professions.

**Fund-raising/Grant Activities for Diabetes Outreach:**

**REACH 2010:** Reducing Disparities related to Diabetes in Charleston and Georgetown Counties was funded by CDC for four years, with 4 year funding anticipated to be $3,928,000. Year 1 funding is 982,001 for September 30, 2000 through September 29, 2001. The grant is a partnership with multiple groups including South Carolina DHEC-Diabetes Control Program, Project SUGAR, Georgetown Diabetes CORE Group, Alpha Kappa Alpha Sorority, Tri-County Black Nurses Association, Enterprise/MUSC Neighborhood Health Program, DHEC Trident and Waccamaw Districts, MUSC Medical Center, Ralph H. Johnson VA Medical Center, USC School of Public Health and other community groups to decrease disparities related to diabetes. DSC is the Central Coordinating Agency.
Palmetto Community Health Network’s “Reducing the Impact of Diabetes in the Pee Dee Region” is a Duke Foundation funded grant to work within 7 counties, 10 hospitals, and over 200 physicians to decrease mortality, morbidity, and costs from diabetes and its complications. Efforts are focused on expanding diabetes education and improving diabetes care for the area’s residents.
DIABETES INITIATIVE OF SOUTH CAROLINA
DIABETES CENTER COUNCIL ANNUAL REPORT
JANUARY 1, 2000 - DECEMBER 31, 2000 (YEAR 06)
Functions

As defined by Section 44-39-70. (A) A Diabetes Center of Excellence is established at the Medical University of South Carolina. The center shall develop and implement programs of professional education, specialized care and clinical research in diabetes and its complications, in accordance with priorities established by the Diabetes Initiative of South Carolina Board.

The activities of the Center are overseen and directed by the Center of Excellence Advisory Council. The Council's purpose is to:

- Review programs in professional education, specialized care, and clinical research developed by the center.
- Assist in the development of proposals for grant funding for the center's activities.
- Prepare an annual report and budget proposal for submission to the Diabetes Initiative of South Carolina Board.

Major Accomplishments

1. Conducted the following professional education programs:

<table>
<thead>
<tr>
<th>Program</th>
<th>No. Courses</th>
<th>No. Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sixth Annual Diabetes Symposium</td>
<td>1</td>
<td>217</td>
</tr>
<tr>
<td>Certified Diabetes Educator Programs</td>
<td>2</td>
<td>170</td>
</tr>
<tr>
<td>Foot Care Courses</td>
<td>4</td>
<td>122</td>
</tr>
<tr>
<td>Taking Diabetes To School Program</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>Model Diabetes Education Programs</td>
<td>4</td>
<td>90</td>
</tr>
</tbody>
</table>

2. Established the following materials for professional education:

The manual on diabetes management for primary care health professionals was presented and discussed at major regional medical meetings and used in the office-based provider education program. It has recently been updated and will be reprinted in 2001, for wide distribution.

- AHEC Primary Care Physicians Office Based Programs:
  John Colwell, Pam Arnold and Elizabeth Todd Heckel conducted 1 program with 45 MD’s: Anderson Family Practice Residency - Anderson, S.C.

3. Coordinated ongoing programs in specialized patient education and care:

- Intensive Diabetes Education, Awareness, and Lifestyle (IDEAL) Program: Type 1 and Type 2 patients.
• The Model Diabetes Education Program(MDEP): to assist hospitals, clinics, and home health agencies in meeting national standards for patient education. Eighteen programs are recognized since 1997. They are:
  1. Anderson Area Medical Center
  2. DHEC Home Health District- Trident
  3. DHEC Home Health District- Appalachia I
  4. DHEC Home Health District- Appalachia II
  5. DHEC Home Health District- Palmetto
  6. St. Francis Home Health
  7. DHEC Home Health District- Appalachia III
  8. DHEC Home Health District- Wateree
  9. DHEC Home Health District- Waccamaw
 10. DHEC Home Health District- Upper Savannah
 11. DHEC Home Health District- Edisto
 12. DHEC Home Health District- PeeDee
 13. DHEC Home Health District- Low Country
 14. DHEC Home Health District- Catawba
 15. Beaufort Memorial Hospital
 16. Joslin Diabetes Center at McLeod
 17. Oconee Memorial Hospital
 18. Sandhills Pharmacy

• Forty-five sites continue to work toward recognition and 7 new sites started the process in 2000.
• Model Diabetes Education Program Manual was updated and reprinted to incorporate ADA (May 2000) Standards for Recognition of Diabetes Education Programs.
• Eight DSC model sites obtained ADA recognition and six are working on the process.

4. Presented the following Academic programs:
• Diabetes curriculum for third year BSN nursing students.
• Diabetes management in underserved communities for MSN nursing students.
• Third Year Medical Student Program: Third year medical students are rotated into defined communities, with monthly assignments in the offices of carefully chosen primary care physicians. They concentrate on diabetic patients in the assigned practice. They develop community projects directed at people with diabetes as part of the rotation. In 2000 all 3rd year students in South Carolina received this experience.
• Diabetes Management Curriculum for Nurse Practitioners.
5. **Developed new programs in specialized patient education and care:**

- The Ten Minute Diabetes Office Visit
- Taking Diabetes To School

6. **Presented public programs on diabetes awareness, education, and prevention:**

- State Prevention Partners (#5 programs/#164 participants)
- Cigna HealthSource (#2 programs/#90 participants)

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**Other accomplishments:**

- Legislative Bill #3928 was defined. Two addendums were added clarifying formulary drugs and non-adherence to minimal standards of care by the physicians. *Legislative Bill #3928 was published in the South Carolina Medical Association Journal, Fall Supplement 2000.* It was added to the Diabetes Initiative web site: [www.musc.edu/diabetes](http://www.musc.edu/diabetes).
- Assisted in the development of the **DHEC/Governors State Plan for Diabetes**. The Diabetes Initiative of South Carolina’s 10 Year Strategic Plan written in 1998 will be the foundation for this plan, providing standardized goals and outcome tracking throughout the state.
- Assisted **Palmetto Community Health Network** with professional training and implementation of their Duke Endowment Grant activities for Diabetes in Chesterfield, Marlboro, Darlington, Dillon, Marion, Florence, and Horry counties.
- Developed guidelines and implemented **Affiliated Partners Recognition**. Spartanburg Regional Medical Center was recognized as the first Diabetes Initiative Affiliated Partner.
- Assisted Car **olina Medical Review** with Medicare policy changes related to diabetes care.
- Assisted in the development of the **Patient Report Card**.
- Participated in clinical research proposals, explained in Supplemental Support.
- Presented the goals and programs of the Diabetes Initiative of South Carolina at professional meetings.
- Developed or assisted in the development of proposals for grant funding for outreach activities.
- Assisted in the updating of the Primary Care Provider office-based manual on Diabetes Management.
- Collaborated with **SC Managed Care Alliance** on the Ten Minute Diabetes Office Visit.
- Participated in the 4th **Annual African American November Conference**.
- Negotiated **Medicaid Contract** (State Health and Human Services Finance Commission) with MUSC Diabetes Center for $20,000 for 2001 - 2002.
- Negotiated **BCBS HMO Diabetes Education Contract** with MUSC Diabetes Center and assisted other programs in the state in this process.
- Assisted in the **Patient Bill of Rights**.
DIABETES INITIATIVE OF SOUTH CAROLINA
SURVEILLANCE COUNCIL ANNUAL REPORT
JANUARY 1, 2000 - DECEMBER 31, 2000 (YEAR 06)
Functions
The Surveillance Council was established in 1995 to develop and implement a state-of-the-art system for the assessment of diabetes in South Carolina, and to provide a mechanism to evaluate interventions and control programs. The Council consists of diabetes care providers, epidemiologist, program specialist and researchers, and is staffed by data specialists at the South Carolina Department of Health and Environmental Control and the Medical University of South Carolina. The Council operates with formal meetings and communications.

The Council has established the following objectives:
- Develop, implement and evaluate surveillance protocols and methodologies to assess diabetes awareness and knowledge, prevalence of diabetes, access to primary care, quality of diabetes self-management, and utilization of monitoring guidelines.
- Evaluate patient and professional education programs.
- Develop and maintain a mechanism to analyze mortality, morbidity, hospitalization and survey data in production of reports to describe the burden of diabetes in South Carolina.
- Develop, establish and maintain a registry of blind South Carolinians that identify diabetic individuals.
- Analyze the effects of co-morbidities with diabetes.
- Establish and maintain an ongoing evaluation of the role of insurance and managed care companies in control of diabetes.
- Function as a central unit composed of multiple organizations and disciplines involved in the surveillance of diabetes in South Carolina.
- Function as a data and information resource for DSC and DCP and other organizations involved in diabetes control.
- Develop and maintain an Internet Website for distribution of information regarding diabetes in South Carolina.
- Establish a scientific forum to showcase diabetes research and projects in South Carolina.
- Establish a methodology to estimate the prevalence of diabetes in South Carolina based on clinical data.
- Establish a methodology to assess trends in diabetes-related outcomes and clinical practices.

Major Accomplishments
The summary of the major accomplishments is:
- Completion and distribution of the second Burden of Diabetes in South Carolina report.
- Development and maintenance of a diverse group of investigators in South Carolina who focus their work on the study of diabetes.
- Development and maintenance of an Internet Webpage.
- Production and distribution of data slides.
- Establishment of the first scientific poster session in conjunction with the 2000 Diabetes Symposium. Over 32 posters were presented with three SC students receiving cash awards.
Establishment of a working committee to identify a methodology to assess trends in clinical practices, patient behaviors and outcomes related to diabetes.

Establishment of a working committee to use clinical data bases to estimate the prevalence of diabetes in South Carolina.

Establishment of a working committee to study type 2 diabetes in young adults.

Specific accomplishments related to the DSC goals are:

**Goal I: To improve knowledge of diabetes, quality of life and access to prevention and intervention services for people at-risk and those affected by diabetes.**

- Working with Carolina Medical Review, the Council has identified baseline estimates of clinical practices regarding HbA1c, microalbumin, eye examinations, foot examinations and lipid profiles.
- Utilization of primary care was identified from the Medicaid database.

**Goal II: To increase the utilization of short-term measures which lead to actions that will delay progression of complications of diabetes.**

- Working with Carolina Medical Review, the Council has identified baseline estimates of clinical practices regarding HbA1c, microalbumin, eye examinations, foot examinations and lipid profiles.
- Diabetes data and information was reported to providers through the distribution of the second Burden report as well as via the Website.
- Information regarding diabetes in South Carolina was also distributed thru MUSC and USC Sites Carolina Medical Review, DCP, and through HMO’s.

**Goal III: To address the needs of people at-risk and those with diabetes by increasing services and education in health professional shortage area in South Carolina.**

- The Council worked with the Office of research and Statistics and Carolina Medical Review to identify areas of shortages based on providers per population.
- Areas of shortage were also identified by area of underutilization based on Medicaid and similar databases.

**Goal IV: To reduce the mortality and disability rates from diabetes-related complications.**

- The Council membership was expanded to include clinical specialists such as nephrology and ophthalmology in order to develop a comprehensive assessment system.
- The Council has established access to a variety of data sources including vital records, Medicaid, Medicare, hospital billing, insurance claims, and the Southeastern Kidney Council in order to establish a comprehensive data system for diabetes.
- The Council has helped establish an inventory of diabetes researchers and projects in South Carolina. The various investigators and projects will be listed on the Webpage. The annual Symposium will also function as a forum for the investigators to meet and exchange ideas regarding diabetes in South Carolina.

**Goal V: To reduce the age-adjusted mortality rates from diabetes and its complications.**

- The Council has identified and plotted trends in mortality associated with diabetes in a manner that can be monitored and used to predict outcomes.

**Goal VI: To decrease risks for select groups of people with diabetes where the prevalence and complication rates exceed those of others.**
Maps have been generated to identify areas of excess risks of diabetes based on self-report, hospitalizations, and Medicaid.

Goal VII: To reduce preventable hospital admissions and charges for diabetes.
- The Council has developed a system of measures based on hospital billing data that assesses costs associated with hospitalizations associated with diabetes.

Goal VIII: To reduce preventable visits to the emergency room by people with diabetes.
- The Council has developed a system of measures based on hospital billing data that assesses costs associated with emergency room use due to conditions associated with diabetes.

Goal IX: To improve the statistical basis for estimating the prevalence of diabetes and diabetes-related complications in South Carolina.
- Trends in hospitalizations for cardiovascular disease with and without diabetes has been identified to estimate the burden of diabetes.
- A committee was established to identify measures that estimate prevalence based on clinical values. The committee will assess Medicare, Medicaid, insurance claims, and hospital discharges to refine the estimates currently based on self-report.
The University of South Carolina, School of Medicine Site has been operational since August 1998. The continued, expanded focus continues to be the creation, identification and integration of programs of the Diabetes Initiative of SC in the Midlands Area.

Accomplishments and activities include:

**DSC/USC Site Governing Committee:**
- 12 member Governing Committee with representatives from all disciplines interacting with people/families with diabetes.
- Division of Governing Committee into Education and Research Sub-groups.

**Ongoing Activities:**
- Leadership for Camp Adam Fisher, SC’s camp for children/adolescents with diabetes. 200 campers June 4 –11, 2000! Volunteer MD’s, nurses, dietitians and PharmD’s from USC School of Medicine and MUSC staff the camp. No child with diabetes in SC is denied access because of inability to pay.
- Further integration of USC Faculty into DSC Councils.
- 3rd year Medical Student Experiential Practicum. Medical students, in 2 hour Practicum take off shoes and socks to examine feet testing with monofilaments for potential nerve damage, stick fingers to test blood sugar; and draw up salt solution to give themselves a shot.
- 3rd year Family Practice Residents, 2 hour interactive discussion on “Psychosocial Aspects of Diabetes”.
- 6th year of training for SC Department of Vocational Rehabilitation Counselors (175 counselors from across the state trained to work with people with diabetes).
- “Diabetes: Not A Family Tradition”, South Carolina African American Conference on Diabetes, 4th year, almost 600 in attendance.
- Participation in Certified Diabetes Educator Review Course (CDE) offered twice a year (250 participants).
- Participation in 40 programs on diabetes education. (450 people).
- Co-leadership participant in development of Midlands Area Diabetes Coalition and Pee Dee area Diabetes Coalitions. Primary leadership under auspices of Diabetes Control Project, DHEC.

**Newest Projects:**
- USC Site Web page to include MD’s, nurses, CDE’s, dietitians and pharmacists in the 46 counties of SC. Seeking to obtain funds to mail a hard copy to churches in SC. Web address: [www.med.sc.edu/diabetesinitiative](http://www.med.sc.edu/diabetesinitiative)
- USC Web page on Nutrition and Therapeutics by Lynn Thomas, RD, DrPH and Sharm Steadman, PharmD, faculty for the USC Department of Family/Preventive Medicine. Web address: [www.med.sc.edu/diabetesmanagement](http://www.med.sc.edu/diabetesmanagement)
- Provided assistance for development of $2.3 million Centers for Disease Control grant, Principal Investigator: Beth Mayer-Davis, PhD, Associate Professor, School of Public Health, and USC entitled
“South Carolina Diabetes Child and Adolescent Registry”.
The South Carolina Diabetes Control Program (SCDCP) is housed and managed within the South Carolina Department of Health and Environmental Control (DHEC), Bureau of Community Health, Chronic Disease Prevention and Control Branch. The Program is administered by a core staff that are comprised of a Program Manager, Community/Coalition Manager, Community Intervention/Education Manager, Health Systems Manager and Administrative Assistant. It is part of the Centers for Disease Control and Preventions (CDC) National Diabetes Control Program.

**Core Staff:**

Program Director
Brenda Nickerson, RN, MSN
Brenda Paul, MSW, MPH

Administrative Assistant
Freda Burris

Health Communication/Coalition Manager
Yaw Boateng, MS, MPH, RD

Community Education Manager
Tammy L. Butler, MPH
(Acting Program Manager)

Health Systems Manager
Ellen Babb, MPH, RD

Epidemiologist
Tim Aldrich, DrPH
Youjie Huang MD, DrPH

**Program Goal & Objectives:**

Program Goal: Reduce disparities in complications and deaths from diabetes in South Carolina.

The three impact objectives of the program are:

1. By 2004, achieve an annual increase of 5% in the number of persons with diabetes in S.C. who receive the following preventive measures: foot exams, eye exams, hemoglobin A1c tests, influenza immunizations, and pneumonia vaccinations.

2. By 2004, achieve a reduction in disparities between African American men and women by increasing the percentage of foot exams, eye exams, hemoglobin A1c tests, influenza immunizations, and pneumonia vaccinations to the percentage of white men and women.

3. By 2004, establish at least one linkage for wellness and physical activity, weight, and blood pressure control, and smoking cessation for persons with diabetes in three community intervention sites.
National Diabetes Objectives:

1. By 2004, demonstrate success in achieving an increase in the percentage of persons with diabetes who receive influenza and pneumonia vaccinations.

2. By 2004, demonstrate success in achieving an increase in the percentage of persons with diabetes who receive the recommended HbA1c testing.

Major Accomplishments under the three programming components of the SC-DCP:

Health Communication and Coalition Development
FORMATION OF DIABETES COALITIONS
Formation of Diabetes Coalitions in the four regions (Coastal, Midlands, Pee Dee, and Upstate) of the state continue and efforts are coordinated through the South Carolina Diabetes Control Program (SCDCP) with the Diabetes Initiative of SC (DSC) Outreach Council providing consultation. The goals of the coalitions include but are not limited to the following.

1. Provide a forum for local communities to discuss activities that are locally driven and controlled;

2. Share resources and information with the expectation that all such efforts will support the implementation of the DSC/DCP 10 Year Strategic Plan;

3. Help create awareness of diabetes and its related issues at the community levels;

4. Increase communication and coordination that will reduce duplication of diabetes related projects;

5. Increase public support for the 10 Year Strategic Plan;

6. Promote collaboration between organizations; and

7. Solicit corporate support.

For the reporting year 2000, the SCDCP organized and held eight regional and two community diabetes coalition meetings in all but one of the four regions. The first meeting of the Upstate Coalition meeting is proposed to be held in February 2001.

The Coastal Coalition has held three meetings within the last year. The dates are March 18, 2000, June 3, 2000 and October 28, 2000.

The Midlands Diabetes Coalition has held three meetings within the last year. The dates are March 1, 2000, May 20, 2000 and October 28, 2000.

The Pee Dee Diabetes Coalition has held three meetings within the last year. The dates are as June 24, 2000, August 1, 2000, and October 7, 2000. The Pee Dee Coalition has advanced in this initiative with a total of five sub-community-based coalitions, which are: 1.) York/Lancaster / 2.) Chester, Sumter/Lee, 3-4.) Florence groups and 5.) Darlington/ Marlboro/Chesterfield.
The Beaufort/Jasper Diabetes Coalition has held two meetings in the last year. The dates are May 4, 2000, and October 12, 2000. The Beaufort/Jasper Community is part of the Coastal region that has representation in the Coastal Diabetes Coalition. This Coalition, unlike the others, relies on the SCDCP/DSC for technical assistance only and has spearheaded all planning and organizational activities.

All the regional and community coalitions that have met have listed and prioritized community assets and challenges with respect to diabetes management and control. Also, they have formed sub-coalitions or community-based coalitions based on geographic affiliations in their respective regions that hold several meetings in between regional meetings. This has allowed more grassroots community-based organizations and individuals to join the coalitions to contribute their resources without necessarily traveling long distances to attend regional coalition meetings. These community coalitions are working on specific issues that are unique to their communities and report their activities to the regional coalition members at regional meetings. Each sub-coalition or community-based coalition has a leader who serves as a liaison between the group and SCDCP and reports group activities at regional coalition meetings.

**PUBLICATIONS/PRESENTATIONS:**

The Following abstracts were presented at the DSC 6th Annual Diabetes Symposium, September 27 – 29, 2000 in Charleston, SC.


The Coastal Diabetes Coalition has two main community-based coalitions so far. They are the Beaufort/Jasper Diabetes Coalition and the Georgetown Diabetes Core Group. The Beaufort/Jasper coalition has three committees (or sub-coalitions) namely; Hilton Head/Bluffton, Jasper County, and Beaufort North committees. The Hilton Head/Bluffton and the Jasper County committees plan to conduct community-based diabetes education in their respective communities, while the Beaufort North committee plans to work on developing a resource directory to highlight economic assistance in the area.

The Georgetown Diabetes Core Group is under the leadership of Miss Florence Linnen. This group is a trained Diabetes Today group that has been involved in several diabetes related activities in the Georgetown area for several years now and has embraced the coalition idea to expand their membership and stronger corporate participation.

**OTHER ACCOMPLISHMENTS**

1. Subscription to the SCDCP Listserve that was created to enable the diabetes community and stakeholders to have access and exchange current and accurate information in the state increased from 150 to more than 300 this reporting year. Meetings and presentations are used as opportunities to update the list.
2. Publication of electronic newsletters was started this year with the aim of improving the dissemination of research findings within the diabetes community to help practitioners translate new treatment regimens into practice for the benefit of people living with diabetes. Two newsletters were published and distributed statewide.

3. The SCDCP website is under construction and near completion. It is projected to be operational by the end of 2000.

Community Education

National Diabetes Education Program (NDEP) materials, specifically the new Community Partnership Guide, have been distributed at regional coalition meetings, at the Intra-agency Diabetes Coordinating Council and to the Diabetes Today Advisory Council members. This is a wonderful resource for community development. This guide provides a wealth of information on planning, implementing and evaluating diabetes related community based activities.

Patient Bill of Rights for people who have diabetes was developed in collaboration with DSC staff and Partners in Wellness staff. The plan is to distribute this to patients and physicians across the state to encourage recommended standards of care.

Community Health Center: Focus groups were completed in one of the demonstration site communities and an educational materials assessment has begin in each center to determine what is being used, what needs to be replaced, and what the staff feel they need. Recommendations will then be used to improve the educational programs within the participating community health centers.

The fourth SC African American Conference on Diabetes was held on November 10, 2000. It is sponsored by the Diabetes Today Advisory Council (DTAC) an organization of 26 community and health care professionals primarily African American interested in improving diabetes care. Each year this Conference on Diabetes has grown by at least 100 participants. This year’s conference was expected to be attended by over 600 individuals.

An In-depth telephone assessment was conducted with the thirteen Diabetes Today Programs across the state the results are being used to determine a protocol for group maintenance with limited staff. Plans are under way for a Diabetes Today Group Update/Retreat for the spring.

National Diabetes Today Trainer Training: The new Community Education Manager and Program Manager along with four community regional representatives attended the Regional Diabetes Today Training in Atlanta June 2000. The idea is that the trained regional representatives will be able to assist with Diabetes Today program training within their regions and provide some technical assistance to new and existing groups within their regions.

Several presentations were made to the SC Partners in Wellness class: The Community Education Manager, Diabetes Today Advisory Council Chair and communication/Coalition Manager have presented about the Diabetes Control Program and the Diabetes Today Advisory Council to classes at SC State University, Claflin College, and Benedict College over the last year. As a result several students have chosen to do class projects with SC DCP and DTAC.

REACH 2010: The Community Education Manager is one of the Co-I on the REACH 2010 grant responsible for the development of a Lay Diabetes Health Advisor training curriculum and conducting the training.
Health Systems
SOUTHEAST DIABETES 2 COLLABORATIVE-SCDCP PARTNERSHIP

The SCDCP is working in partnership with three Community Health Centers (CHC’s), as well as the national Bureau of Primary Health Care (BPHC) on the Health Status & Performance Improvement Collaborative to improve the quality of care at these health centers. The three health centers are: Beaufort-Jasper-Hampton Comprehensive Health Care, Inc.; Sandhills Medical Foundation, Inc.; and Black River Health Care, Inc. Through these partnerships, SCDCP seeks to eliminate disparities in complications and deaths from diabetes, and to increase levels of testing in the following preventive measures: foot exams, eye exams, hemoglobin A1c tests, influenza immunizations and pneumonia vaccinations.

The SCDCP Health Services Manager serves as Cluster Coordinator for diabetes teams at these 3 CHCs, which involves coaching the teams; providing technical assistance to teams; reviewing and providing feedback on reports; providing resources; facilitating local, state and national partnerships; sponsoring attendance at learning sessions; and serving as faculty and helping with curriculum for learning sessions.

In 2000, the DCP Health Systems Manager and teams of 3-4 from each of the three Centers attended one national and two regional learning sessions. The SCDCP HSM served as faculty for both regional sessions. Beaufort-Jasper-Hampton Comprehensive Health Care presented its changes in the practice redesign component of the Chronic Care Model. Each Health Center has a diabetes team, which meets regularly and includes a physician, nurse practitioner, senior leadership, other clinical staff (LPN, PharmD, RD), and other staff.

QUALITY IMPROVEMENT METHODS

Models for Quality Improvement and Change

Quality improvements in the centers are being achieved using two models developed by the Institute for Health Care Improvement (IHI): the Chronic Disease Model and a rapid change model which uses PDSA (Plan, Do, Study, Act) cycles. Using the Chronic Disease Model, Health Centers are making simultaneous improvements/changes in the following areas: health care organization, patient self-management, decision support, delivery system design, clinical information systems, and in community relationships.

Chart Audits to Collect Baseline Data

Chart audits were conducted by the SCDCP on approximately 250 charts at all 13 sites of the 3 Health Centers. Chart audits provided baseline data for 1999. Site-specific data collected included: provider, race, sex, age, type of insurance, dates of all diabetes visits, whether the following were done: foot exams, eye exams, eye referrals, eye referral compliance, HbA1c, lipid profile, flu vaccine, pneumonia vaccine, nephropathy assessment (proteinuria and/or microalbuminuria), patient education referrals, and compliance to education referral. Numerical values for all HbA1c’s, blood pressures, and lipid profiles were also recorded.

Diabetes Electronic Management System (DEMS)
All centers have an electronic diabetes patient registry, the Diabetes Electronic Management System (DEMS). All three centers have entered all patients in their population of focus (patients of one physician at one site) into the Diabetes Electronic Management System (DEMS) registry (approximately 86-124 patients each). The DEMS program helps centers recall patients for tests and follow-up care, and helps providers find information without having to flip through charts.

The national Collaborative is working on an electronic system, which can be used not only for patients with diabetes, but also for patients with cardiovascular disease, asthma, or depression. The Regional Medical Center in Orangeburg is using DEMS to track its inpatient and outpatient diabetes patients.

**Accountability/Process**

Conference calls were held weekly in the beginning of the year and monthly during the last 4 months. All centers send in monthly reports on their progress, including quantitative data on progress on their aim (objective) and the measures they have chosen to follow.

**RESULTS: QUALITY IMPROVEMENTS BY CENTERS**

**Accomplishments by all centers:**

- Established Diabetes Days or planned visits in which patients with diabetes receive specialized care from the provider and educator(s).
- Reminder systems in place to recall patients.
- Provide some type of physical activity education.
- Partnerships with other local professionals to provide this specialized care.
- Set self-management goals with patients; developed pictorial self-management tools.
- Are spreading their programs to another site with their center in the last quarter.
- Significant improvements in number of foot exams and self-management goals set.
- Improved patient flow.
- Improved methods to identify diabetic charts.

**Quality improvements in one or more other centers:**

- Ongoing partnership for provision of services with a DHEC district diabetes program and social worker (Black River)
- Ongoing partnership with local transportation services to get patients to the clinic (Black River)
- National Diabetes Education Program Partner (NDEP).
- Partnered with local foot care specialists, diabetes educators, dietitians, home manager, pharmacist, pharmaceutical representatives (Black River).
- Showing patient education videos on loan from SC DCP (Black River).
- Developed an illustrated diabetes patient newsletter (Black River).
- Facilitated obtaining Telemedicine equipment (Black River).
- Partnered with Robert DeFee, PharmD, whose diabetes education program has attained state recognition; he has contracted with a dietitian and diabetes educator to work with him at Sandhills.
- Working on obtaining ADA Recognition (Beaufort Jasper, Hampton).
- Received JCAHO accreditation in 2000 (Beaufort, Jasper, Hampton).
- Partnered with the MUSC dental van.
- Established a foot care clinic (Beaufort, Jasper, Hampton).
- Has partnered with a local ophthalmologist to come to Sheldon Center (Beaufort, Jasper, Hampton).

**Diabetes Initiative of South Carolina**

**Board of Directors and Council Members**

**Board of Directors**

**Members**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>John A. Colwell, MD, PhD, CDE (Chair)</td>
<td>Director, Diabetes Center, MUSC</td>
</tr>
<tr>
<td>Pamela Arnold, RN, MSN, CDE</td>
<td>Diabetes Center, MUSC</td>
</tr>
<tr>
<td>Doniece Bagley, RN</td>
<td>Catawba Indians</td>
</tr>
<tr>
<td>Catherine Haselden</td>
<td>Governor’s Office</td>
</tr>
<tr>
<td>Elizabeth Todd Heckel, MSW, CDE</td>
<td>USC/DSC Site, University of SC</td>
</tr>
<tr>
<td>Ira Horton, MD</td>
<td>SC HHS Finance Comm.</td>
</tr>
<tr>
<td>Carolyn Jenkins, RD, RN, CDE, DrPH</td>
<td>Outreach Council, MUSC</td>
</tr>
<tr>
<td>David Keisler, MD (Co-Chair)</td>
<td>SC Academy of Family Physicians</td>
</tr>
<tr>
<td>Lowery King, MD</td>
<td>Ophthalmology, Private Practice</td>
</tr>
<tr>
<td>Daniel Lackland, DrPH</td>
<td>Epidemiology/Biometry, MUSC</td>
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<td>Usah Lilavivat, MD</td>
<td>Internal Medicine</td>
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<td>SC Medical Association</td>
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<td>Al Pakalnis, MD</td>
<td>University of SC, Ophthalmology</td>
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<td>William Price, MD</td>
<td>Internal Medicine</td>
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<td>SC DHEC - Office of Minority Health</td>
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<td>Valerie Summersett, RN, MSN, CDE</td>
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<td>Kenneth Trogdon</td>
<td>Commun-I-Care</td>
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<td>Lisa Waddell, MD, MPH/Tammy Butler, MPH</td>
<td>SC DHEC</td>
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<tr>
<td>Fran C. Wheeler, PhD</td>
<td>USC School of Public Health</td>
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<tr>
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<tr>
<td>Edwin Bransome, MD</td>
<td>Diabetes Treatment Center, Aiken, GA.</td>
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<td>Companion, HMO</td>
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<td>Sabra Slaughter, PhD</td>
<td>Office of the President, MUSC</td>
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<td>SC DCP-DHEC</td>
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<td>James B. Edwards, DMD</td>
<td>MUSC</td>
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<td>Stephen Smith</td>
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<td>Biometry/Epidemiology, MUSC</td>
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Outreach Council

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